ABSTRACT OF THE DISCLOSURE

The invention concerns a method for automatic focusing onto the surface of a sample P, in which sample P is illuminated by a measurement light beam 13 that strikes the sample surface at an incidence angle differing from 0°; light reflected therefrom is detected by means of a position-sensitive receiving surface (23); intensity values as allocated to positions on the receiving surface (23) are recorded and evaluated; and the opening of a field stop (7) is imaged onto the receiving surface (23), thereby generating an image that is smaller than the receiving surface (23).

In such a method, a value of "light" or "dark" is allocated to each intensity value as a function of a brightness threshold; the smallest rectangle (26) that encloses all "light" positions on the receiving surface (23) is determined; the geometric center point of that rectangle (26) is determined; the position of that point is compared with the position on the receiving surface (23) that corresponds to the geometric center point of the image generated by field stop (79 in the focused state; and a change in the distance between the sample (P) and the imaging optical system corresponding to the distance between the two points is effected.

(FIG. 1)